

METHOD AND APPARATUS FOR MEASURING
FEATURES OF A SEMICONDUCTOR DEVICE

ABSTRACT OF THE DISCLOSURE

A method and apparatus for measuring the dimensions of features on the surface of a semiconductor device. The method may include passing a first electron beam having a first depth of focus over the semiconductor device and passing a second electron beam having a second depth of focus over the device. Electrical signals generated by the two electron beams may be analyzed singly or in combination to determine the lateral or vertical dimensions of the features at one or more positions relative to the surface of the semiconductor device. In one embodiment, the first and second electron beams are generated sequentially from a single electron gun. In another embodiment, the first and second electron beams are generated sequentially or simultaneously by either two separate electron guns or a single electron gun positioned proximate to two separate electron beam ports.